Amendments to the Claims

Please amend the claims as follows (the changes in these claims are shown with strikethrough for deleted text and <u>underlines</u> for added text). A complete listing of the claims is listed below with proper claim identifiers. This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

1. (Currently Amended) A modulator of the formula (I) or a salt thereof:

where L is -C(O)-, -S-, -S(O)- or $-S(O)_2$ -;

X represents from 1 to 4 substituents independently selected from the group consisting of halogen, $-CN_7$, -OH, $-OR^1$, $-C(O)R^1$, $-CO_2R^1$, $-O(CO)R^1$, $-C(O)NR^1R^2$, $-OC(O)NR^1R^2$, $-SR^1$, $-SO_2R^1$, $-SO_2R^1$, $-SO_2NR^1R^2$, $-NR^1R^2$, $-NR^1C(O)R^2$, $-NR^1C(O)_2R^2$, $-NR^1SO_2R^2$, $-NR^1(CO)NR^1R^2$, unsubstituted C_{2-8} alkyl, substituted C_{1-8} alkyl, unsubstituted or substituted C_{2-8} alkenyl, unsubstituted or substituted C_{2-8} alkynyl, unsubstituted or substituted C_{3-8} cycloalkyl, unsubstituted or substituted 6- to 10-membered aryl, unsubstituted or substituted 5- to 10-membered heteroaryl, and unsubstituted or substituted 3- to 10-membered heterocyclyl;

 R^1 , R^2 and R^3 are each independently selected from the group consisting of hydrogen, unsubstituted or substituted C_{1-6} alkyl, unsubstituted or substituted C_{3-6} cycloalkyl, unsubstituted or substituted C_{2-6} alkenyl, unsubstituted or substituted C_{2-6} alkynyl, unsubstituted or substituted 6- to 10-membered aryl, unsubstituted or substituted or substituted 5- to 10-membered heteroaryl, unsubstituted or substituted aryl- C_{1-4} alkyl,

unsubstituted or substituted aryl- C_{1-4} alkyl, and unsubstituted or substituted aryloxy- C_{1-4} alkyl; or

two of R¹, R² and R³ together with the atom(s) to which they are attached, may form an unsubstituted or substituted 5-, 6- or 7-membered ring;

Y represents from 1 to 3 substituents, each independently selected from the group consisting of halogen, -CN, -OH, -OR 4 , -C(O)R 4 , -CO $_2$ R 4 , -SR 4 , -SOR 4 , -SO $_2$ R 4 , and unsubstituted or substituted C $_{1-4}$ alkyl;

 R^4 is selected from the group consisting of hydrogen, unsubstituted or substituted C_{1-6} alkyl, unsubstituted or substituted C_{3-6} cycloalkyl, unsubstituted or substituted C_{2-6} alkynyl;

Z represents 0 to 5 substituents independently selected from the group consisting of halogen, unsubstituted or substituted C_{1-8} alkyl, unsubstituted or substituted C_{3-8} cycloalkyl, unsubstituted or substituted C_{2-8} alkenyl, unsubstituted or substituted C_{2-8} alkenyl, unsubstituted or substituted C_{1-8} alkoxy, =0, -CN, -NO₂, -OH, -OR⁷, -OC(O)R⁷, -CO₂R⁷, -C(O)R⁷, -CONR⁷R⁸, -OC(O)NR⁷R⁸, -NR⁷C(O)R⁸, -NR⁷C(O)R⁸, -NR⁷C(O)NR⁸R⁹, -NR⁷R⁸, -NR⁷CO₂R⁸, -SR⁷, -SOR⁷, -SO₂R⁷, -SO₂NR⁷R⁸, -NR⁷SO₂R⁸, unsubstituted or substituted 6- to 10-membered aryl, unsubstituted or substituted heterocyclyl; and

 R^7 , R^8 and R^9 are each independently hydrogen, unsubstituted or substituted C_{1-6} alkyl, unsubstituted or substituted C_{3-6} cycloalkyl, unsubstituted or substituted C_{2-6} alkenyl, unsubstituted or substituted C_{2-6} alkynyl, unsubstituted or substituted phenyl, unsubstituted or substituted heteroaryl, unsubstituted or substituted aryl- C_{1-4} alkyl, and unsubstituted or substituted aryloxy- C_{1-4} alkyl; or where any two of R^7 , R^8 and R^9 together with the atom(s) to which they are attached, may form a 5-, 6- or 7-membered ring:

with the proviso that when L is –C(O)-, X is 4-halogen, and Z is hydrogen, Y is other than hydrogen, 4-chloro, or 4-methyl;

with the proviso that the following compounds are excluded from the scope of formula (I):

N-(2-benzoylphenyl)-3,5-bis(trifluoromethyl)-benzenesulfonamide;
N-(4-amino-2-benzoylphenyl)-4-methoxy-benzenesulfonamide;

N-[4-[[(2-benzoyl-4-chlorophenyl)amino]sulfonyl]phenyl]-acetamide;

N-(2-benzoyl-4-chlorophenyl)-4-ethyl-benzenesulfonamide;

N-(2-benzoyl-4-chlorophenyl)-2,4,6-trimethyl-benzenesulfonamide;

N-(2-benzoyl-4-chlorophenyl)-2,4,6-tris(1-methylethyl)-

benzenesulfonamide;

N-(2-benzoyl-4-chlorophenyl)-4-methoxy-benzenesulfonamide;

N-(2-benzoyl-4-chlorophenyl)-4-tricyclo[3.3.1.13,7]dec-1-yl-

benzenesulfonamide;

N-[4-bromo-2-(2-fluorobenzoyl)phenyl]-3,4-dimethoxy-

benzenesulfonamide;

N-[4-chloro-2-(2-chlorobenzoyl)phenyl]-4-(2-propenyloxy)-

benzenesulfonamide;

N-[4-chloro-2-(2-chlorobenzoyl)phenyl]-3,4-dimethoxy-

benzenesulfonamide;

N-[4-chloro-2-(2-chlorobenzoyl)phenyl]-2,5-dimethoxy-

benzenesulfonamide;

2-amino-N-(2-benzoyl-4-methylphenyl)-benzenesulfonamide;

N-(2-benzoyl-5-methylphenyl)-N,4-dimethyl-benzenesulfonamide; and 2-amino-2'-benzoyl-4'-chloro-benzenesulfonanilide.

- 2. (Original) The modulator of claim 1, where L is -CO-.
- 3. (Currently Amended) The modulator of claim 2, where X represents from 1 to 3 substituents independently selected from the group consisting of halogen, -CN, -OH, -OR 1 , -C(O)R 1 , -CO $_2$ R 1 , -O(CO)R 1 , -OC(O)NR 1 R 2 , -SR 1 , -SOR 1 , -SO $_2$ R 1 , -NR 1 R 2 , -NR 1 C(O)R 2 , -NR 1 C(O) $_2$ R 2 , -NR 1 (CO)NR 1 R 2 , unsubstituted C $_2$ -8 alkyl, substituted C $_1$ -8 alkyl, unsubstituted or substituted C $_2$ -8 alkenyl, unsubstituted or substituted C $_3$ -8 cycloalkyl, unsubstituted or substituted 6- to 10-membered aryl, unsubstituted or substituted 5- or 6-membered heteroaryl, or unsubstituted or substituted 3- to 7-membered heterocyclyl.

- 4. (Original) The modulator of claim 2, where at least one X substituent is situated *para* to the sulfonamido bond as defined in formula (I).
- 5. (Original) The modulator of claim 2, where at least one X substituent is situated *meta* to the sulfonamido bond as defined in formula (I).
- 6. (Original) The modulator of claim 2, where at least one X substituent is situated *ortho* to the sulfonamido bond as defined in formula (I).
- 7. (Original) The modulator of claim 2, where at least one X is unsubstituted C_{2-8} alkyl, unsubstituted C_{2-8} alkenyl, or unsubstituted C_{2-8} alkynyl.
- 8. (Original) The modulator of claim 2, where at least one X is substituted C_{1-8} alkyl, substituted C_{3-8} cycloalkyl, substituted C_{2-8} alkenyl, or substituted C_{2-8} alkynyl, each having from 1 to 5 substituents independently selected from the group consisting of halogen, -OH, -CN, -NO₂, -O, -OC(O)R¹, -OR¹, -C(O)R¹, -CONR¹R², -OC(O)NR¹R², -NR²C(O)R¹, -NR¹C(O)NR²R³, -CO₂R¹, -NR¹R², -NR²CO₂R¹, -SR¹, -SOR¹, -SO₂R¹, -SO₂NR¹R², -NR¹SO₂R², unsubstituted or substituted 6- to 10-membered aryl, unsubstituted or substituted 5- to 10-membered heteroaryl, and unsubstituted or substituted 3- to 10-membered heterocyclyl.
- 9. (Original) The modulator of claim 8, where at least one X is substituted C_{1-8} alkyl, having from 1 to 3 substituents independently selected from the group consisting of halogen, -OH, -CN, =O, -OC(O)R¹, -OR¹, -C(O)R¹, -CONR¹R², -NR²C(O)R¹, -CO₂R¹, -NR¹R², -SO₂R¹, unsubstituted or substituted phenyl, and unsubstituted or substituted 5- or 6-membered heteroaryl.
- 10. (Original) The modulator of claim 2, where at least one X is unsubstituted or substituted 6- to 10-membered aryl, unsubstituted or substituted 5- to 10-membered heteroaryl, or unsubstituted or substituted 3- to 10-membered heterocyclyl, where when X is substituted is has from 1 to 4 substituents independently selected from the group consisting of halogen, unsubstituted or substituted C_{1-8} alkyl, -CN, -NO₂, -OH, -OR¹, =O,

- $-OC(O)R^1, -CO_2R^1, -C(O)R^1, -CONR^1R^2, -OC(O)NR^1R^2, -NR^2C(O)R^1, -NR^1C(O)NR^2R^3, -NR^1R^2, -NR^2CO_2R^1, -SR^1, -SOR^1, -SO_2R^1, -SO_2NR^1R^2, and -NR^1SO_2R^2.$
- 11. (Original) The modulator of claim 10, where at least one X is unsubstituted or substituted phenyl, where when X is substituted it has from 1 to 3 substituents independently selected from the group consisting of halogen, -OH, -OR¹, -C(O)R¹, -CONR¹R², -NR²C(O)R¹, -NR¹R², -SO₂R¹, and unsubstituted or substituted C_{1-8} alkyl.
- 12. (Original) The modulator of claim 10, where at least one X is unsubstituted or substituted 3- to 7-membered hetetocyclyl, where when X is substituted it has from 1 to 3 substituents independently selected from the group consisting of C_{1-8} alkyl, $-OR^1$, -OH, $-OC(O)R^1$, $-CO_2R^1$, $-C(O)R^1$, $-CONR^1R^2$, $-NR^1R^2$, $-SO_2R^1$, and $-NR^1SO_2R^2$.
- 13. (Currently Amended) The modulator of claim 10, where at least one X <u>is</u> unsubstituted or substituted 5- or 6-membered heteroaryl, where when X is substituted it has from 1 to 3 substituents independently selected from the group consisting of halogen, -OH, -OR¹, -C(O)R¹, -CONR¹R², -NR²C(O)R¹, -NR¹R², -SO₂R¹, and unsubstituted or substituted C_{1-8} alkyl.
- 14. (Original) The modulator of claim 2, where R^1 , R^2 and R^3 , when substituted, can have from 1 to 3 substituents independently selected from the group consisting of halogen, -OH, -OR', -OCOHNR', -OCONR'₂, -SH, -SR', -SO₂NH₂, -CONH₂, -NHC(O)NH₂, NR'C(O)NH₂, -CO₂H, -CN, -NO₂, -NH₂, -NHR' and -NR'₂, -S(O)R', -S(O)₂R', -CO₂R', -CONR'₂, -CONHR', -C(O)R', -NR'COR', -NHCOR', -NR'CO₂R', -NHCO₂R', -NR'C(O)NR'₂, -NHC(O)NR'₂, -NR'C(O)NHR', -NHC(O)NHR', -NR'SO₂R', -NHSO₂R', -SO₂NR'₂, and -SO₂NHR', where R' is C₁₋₆ alkyl.
- 15. (Original) The modulator of claim 2, where Y represents from 1 to 3 substituents independently selected from the group consisting of halogen, -CN, -OR⁴, -C(O)R⁴, -SR⁴, -CF₃, -SOR⁴, and -SO₂R⁴.

- 16. (Original) The modulator of claim 15, where Y represents from 1 to 3 substituents independently selected from the group consisting of halogen, -CN, -CF₃, and -SO₂R⁴.
- 17. (Original) The modulator of claim 15, where at least one Y represents halogen.
- 18. (Original) The modulator of claim 2, where Y represents from 1 to 2 substituents, each independently selected from the group consisting of halogen, -CN, -OH, -OR 4 , -C(O)R 4 , -CO $_2$ R 4 , -SR 4 , -SOR 4 , -SO $_2$ R 4 , and unsubstituted or substituted C_{1.4} alkyl.
- 19. (Original) The modulator of claim 18, where one Y represents a halogen and another substituent selected from the group consisting of halogen, -CN, -OH, -OR⁴, -C(O)R⁴, -CO₂R⁴, -SR⁴, -SOR⁴, -SO₂R⁴ and unsubstituted or substituted C_{1-4} alkyl.
- 20. (Original) The modulator of claim 18, where at least one Y substituent is located *para* to the sulfonamide bond as defined in formula (I) and another Y substituent is halogen.
- 21. (Original) The modulator of claim 15, where at least one Y is unsubstituted C_{1-4} alkyl.
- 22. (Original) The modulator of claim 15, where at least one Y is substituted C_{1-4} alkyl, having from 1 to 3 substituents independently selected from the group consisting of halogen, -OH, -OR⁴, -CN, -NO₂, =O, -OC(O)R⁴, -CO₂R⁴, -C(O)R⁴, -CONR⁴R⁵, -OC(O)NR⁴R⁵, -NR⁴C(O)R⁵, -NR⁴C(O)NR⁵R⁶, -NR⁴R⁵, -NR⁴CO₂R⁵, -SR⁴, -SO₂R⁴, -SO₂NR⁴R⁵, and -NR⁴SO₂R⁵,

where R^4 , R^5 and R^6 are each independently selected from the group consisting of hydrogen, unsubstituted or substituted C_{1-6} alkyl, unsubstituted or substituted C_{1-6} alkenyl, and unsubstituted or substituted C_{2-6} alkenyl; or where any two of R^4 , R^5 and R^6 together with the atom(s) to which they are attached, may form a 5-, 6- or 7-membered ring.

- 23. (Original) The modulator of claim 22, where at least one Y is substituted C_{1-4} alkyl, having from 1 to 3 substituents independently selected from the group consisting of halogen, -OH, -OR⁴, -CN, -NO₂, =O, -OC(O)R⁴, -CO₂R⁴, -C(O)R⁴, -CO₂R⁴, -NR⁴C(O)R⁵, -NR⁴R⁵, -NR⁴, -SR⁴, -SOR⁴, -SO₂R⁴, and -NR⁴SO₂R⁵.
- 24. (Original) The modulator of claim 23, where R^4 , R^5 and R^6 , when substituted, can have from with from 1 to 3 substituents independently selected from the group consisting of halogen, -OH, -OR', -SH, -SR', -SO₂NH₂, -CONH₂, -NHC(O)NH₂, $N(C_{1-6}alkyl)C(O)NH_2$, -CO₂H, -CN, -NO₂, -NH₂, -NHR', -NR'₂, -S(O)R', -S(O)₂R', -CO₂R', -CONHR', -CONR'₂, and -C(O)R', where R' is $C_{1-6}alkyl$.
- 25. (Original) The modulator of claim 2, where Z represents 0 to 3 substituents independently selected from the group consisting of halogen, unsubstituted or substituted C_{1-8} alkyl, unsubstituted or substituted C_{3-8} cycloalkyl, unsubstituted or substituted C_{2-8} alkenyl, unsubstituted or substituted C_{2-8} alkynyl, unsubstituted or substituted C_{1-8} alkoxy, =O, -CN, -NO₂, -OH, -OR⁷, -OC(O)R⁷, -CO₂R⁷, -C(O)R⁷, -CONR⁷R⁸, -NR⁷C(O)R⁸, -NR⁷R⁸, -SR⁷,-SOR⁷, -SO₂R⁷, -SO₂NR⁷R⁸, -NR⁷SO₂R⁸, unsubstituted or substituted phenyl, unsubstituted or substituted 5- or 6-membered heteroaryl, and unsubstituted or substituted 3- to 7-membered heterocyclyl.
- 26. (Original) The modulator of claim 2, where Z represents 0 to 2 substituents independently selected from the group consisting of halogen, unsubstituted or substituted C_{1-6} alkyl, unsubstituted or substituted C_{1-6} alkoxy, =O, -CN, -NO₂, -OH, -OR⁷, -C(O)R⁷, -CONR⁷R⁸, -NR⁷C(O)R⁸, -NR⁷R⁸, -SR⁷, -SOR⁷, -SO₂R⁷, -SO₂NR⁷R⁸, -NR⁷SO₂R⁸, unsubstituted or substituted phenyl, unsubstituted or substituted 3 to 7-membered heterocycyl, and unsubstituted or substituted 5-or 6-membered heteroaryl.
- 27. (Previously Presented) The modulator of claim 25, where at least one Z is unsubstituted C_{1-8} alkyl, unsubstituted C_{3-8} cycloalkyl, unsubstituted C_{2-8} alkenyl, unsubstituted C_{2-8} alkynyl or unsubstituted C_{1-8} alkoxy, unsubstituted 6- to 10-membered aryl, unsubstituted 3- to 7-membered heterocyclyl, and 3- to 7-membered heteroaryl.

- 28. (Previously Presented) The modulator of claim 25, where at least one Z is substituted C_{1-8} alkyl, substituted C_{3-8} cycloalkyl, substituted C_{2-8} alkenyl, substituted C_{2-8} alkenyl or substituted C_{1-8} alkoxy, each having from 1 to 5 substituents independently selected from the group consisting of halogen, -OH, -OR⁷, -CN, -NO₂, =O, -CN, -NO₂, -OC(O)R⁷, -CO₂R⁷, -C(O)₂R⁷, -C(O)R⁷, -CONR⁷R⁸, -OC(O)NR⁷R⁸, -NR⁷C(O)R⁸, -NR⁷C(O)NR⁸R⁹, -NR⁷R⁸, -NR⁷CO₂R⁸, -SR⁷, -SOR⁷, -SO₂R⁷, -SO₂NR⁷R⁸, -NR⁷SO₂R⁸, unsubstituted or substituted phenyl, unsubstituted or substituted 5- or 6-membered heteroaryl, or unsubstituted or substituted 3- to 6-membered heterocyclyl.
- 29. (Previously Presented) The modulator of claim 25, where each R⁷, R⁸ and R⁹, when substituted, can have from 1 to 3 substituents independently selected from the group consisting of halogen, -OH, -OR', -OCONHR', -OCONR'₂, -SH, -SR', -CN, -SO₂NH₂, -CONH₂, -NHC(O)NH₂, -NR'C(O)NH₂, -CO₂H, -NO₂, -NH₂, -NHR', -NR'₂, -S(O)R', -S(O)₂R', -CO₂R', -CONR'₂, -CONHR', -C(O)R', -NR'COR', -NHCOR', -NR'CO₂R', -NHCO₂R', -NR'C(O)NR'₂, -NHC(O)NR'₂, -NR'C(O)NHR', -NHC(O)NHR', -NR'SO₂R', -NHSO₂R', -SO₂NR'₂, and -SO₂NHR', where R' is C₁₋₆alkyl.
- 30. (Original) The modulator of claim 3, where Y represents from 1 to 3 substituents, each independently selected from the group consisting of halogen, -CN, -OH, -OR 4 , -C(O)R 4 , -CO $_2$ R 4 , -SR 4 , -SOR 4 , -SO $_2$ R 4 , and unsubstituted or substituted C₁₋₄ alkyl.
 - 31. (Original) The modulator of claim 30, where at least one Y is halogen.
- 32. (Original) The modulator of claim 25, where Y represents from 1 to 3 substituents, each independently selected from the group consisting of halogen, -CN, -OH, -OR 4 , -C(O)R 4 , -CO $_2$ R 4 , -SR 4 , -SOR 4 , -SO $_2$ R 4 , and unsubstituted or substituted C₁₋₄ alkyl.
 - 33. (Original) The modulator of claim 32, where at least one Y is halogen.
- 34. (Original) The modulator of claim 15, where Z represents 0 to 3 substituents independently selected from the group consisting of halogen, unsubstituted or substituted C_{1-8} alkyl, unsubstituted or substituted C_{3-8} cycloalkyl, unsubstituted or

substituted C_{2-8} alkenyl, unsubstituted or substituted C_{2-8} alkynyl, unsubstituted or substituted C_{1-8} alkoxy, =O, -CN, -NO₂, -OH, -OR⁷, -OC(O)R⁷, -CO₂R⁷, -C(O)R⁷, -CONR⁷R⁸, -NR⁷C(O)R⁸, -NR⁷R⁸, -SR⁷, -SOR⁷, -SO₂R⁷, -SO₂NR⁷R⁸, -NR⁷SO₂R⁸, unsubstituted or substituted phenyl, unsubstituted or substituted 5- or 6-membered heteroaryl, and unsubstituted or substituted 3- to 7-membered heterocyclyl.

- 35. (Original) The modulator of claim 34, where X is unsubstituted C_{2-8} alkyl or substituted C_{1-8} alkyl.
 - 36. (Original) The modulator of claim 34, where at least one Y is halogen.
- 37. (Original) The modulator of claim 30, where Z represents 0 to 3 substituents independently selected from the group consisting of halogen, unsubstituted or substituted C_{1-8} alkyl, unsubstituted or substituted C_{3-8} cycloalkyl, unsubstituted or substituted C_{2-8} alkenyl, unsubstituted or substituted C_{2-8} alkynyl, unsubstituted or substituted C_{1-8} alkoxy, =0, -CN, -NO₂, -OH, -OR⁷, -OC(O)R⁷, -CO₂R⁷, -C(O)R⁷, -CONR⁷R⁸, -NR⁷C(O)R⁸, -NR⁷R⁸, -SR⁷, -SOR⁷, -SO₂R⁷, -SO₂NR⁷R⁸, -NR⁷SO₂R⁸, unsubstituted or substituted phenyl, unsubstituted or substituted 5- or 6-membered heteroaryl, and unsubstituted or substituted 3- to 7-membered heterocyclyl.
- 38. (Original) The modulator of claim 37, where X is unsubstituted C_{2-8} alkyl or substituted C_{1-8} alkyl.
 - 39. (Original) The modulator of claim 37, where at least one Y is halogen.
- 40. (Original) The modulator of claim 1, which has activity in a chemotaxis assay of <10000 nM.
- 41. (Original) The modulator of claim 1, which has activity in a chemotaxis assay of <1000 nM.
- 42. (Original) The modulator of claim 1, which has activity in a chemotaxis assay of <100 nM.

- 43. (Original) The modulator of claim 1, which has activity in a CCR9 chemotaxis assay of <10000 n M.
- 44. (Original) The modulator of claim 1, which has activity in a CCR9 chemotaxis assay of <1000 nM.
- 45. (Original) The modulator of claim 1, which has activity in a CCR9 chemotaxis assay of <100 n M.
- 46. (Currently Amended) A modulator of one of the formulae (II) or (III) or a salt thereof:

where X' and X" are each independently selected from the group consisting of hydrogen, halogen, CN_1 , CN_2 , CN_3 , CN_4 , CN_5

 R^1 , R_2 and R^3 are each independently selected from the group consisting of hydrogen, C_{1-6} alkyl, C_{3-6} cycloalkyl, C_{2-6} alkenyl, C_{2-6} alkynyl, 6- to 10-membered aryl, 5- to 10-membered heteroaryl, aryl- C_{1-4} alkyl, aryl- C_{1-4} alkyl, and aryloxy- C_{1-4} alkyl; or

two of R¹, R² and R³ together with the atom(s) to which they are attached, may form a 5-, 6- or 7- membered ring;

Y' and Y" are each independently selected from the group consisting of hydrogen, halogen, -CN, -OH, -OR 4 , -C(O)R 4 , -CO $_2$ R 4 , -SR 4 , -SOR 4 , -SO $_2$ R 4 and unsubstituted or substituted C $_{1-4}$ alkyl, with the proviso that Y' and Y" cannot both be hydrogen simultaneously;

 R^4 is selected from the group consisting of hydrogen, unsubstituted or substituted C_{1-6} alkyl, unsubstituted or substituted C_{3-6} cycloalkyl, unsubstituted or substituted C_{2-6} alkenyl, and unsubstituted or substituted C_{2-6} alkynyl;

Z' and Z" are each independently selected from the group consisting of hydrogen, halogen, unsubstituted or substituted C_{1-8} alkyl, unsubstituted or substituted C_{3-8} cycloalkyl, unsubstituted or substituted C_{2-8} alkenyl, unsubstituted or substituted C_{2-8} alkenyl, unsubstituted or substituted C_{1-8} alkoxy, =0, -CN, -NO₂, -OH, -OR⁷, -OC(O)R⁷, -CO₂R⁷, -C(O)R⁷, -CONR⁷R⁸, -OC(O)NR⁷R⁸, -NR⁷C(O)R⁸, -NR⁷C(O)NR⁸R⁹, -NR⁷R⁸, -NR⁷CO₂R⁸, -SR⁷, -SOR⁷, -SO₂R⁷, -SO₂NR⁷R⁸, -NR⁷SO₂R⁸, unsubstituted or substituted 6- to 10-membered aryl, unsubstituted or substituted 5- or 6-membered heteroaryl and unsubstituted or substituted 3- to 7-membered heterocyclyl; and

where R^7 , R^8 and R^9 are each independently hydrogen, unsubstituted or substituted C_{1-6} alkyl, unsubstituted or substituted C_{2-6} alkenyl, unsubstituted or substituted C_{2-6} alkynyl, unsubstituted or substituted phenyl, unsubstituted or substituted heteroaryl, unsubstituted or substituted aryl- C_{1-4} alkyl, and unsubstituted or substituted aryloxy- C_{1-4} alkyl; or where any two of R^7 , R^8 and R^9 together with the atom(s) to which they are attached, may form a 5-, 6- or 7- membered ring;

with the proviso that the following compounds are excluded from the scope of formulae (II) and (III):

N-(2-benzoylphenyl)-3,5-bis(trifluoromethyl)-benzenesulfonamide;
N-(4-amino-2-benzoylphenyl)-4-methoxy-benzenesulfonamide;
N-[4-[[(2-benzoyl-4-chlorophenyl)amino]sulfonyl]phenyl]-acetamide;
N-(2-benzoyl-4-chlorophenyl)-4-ethyl-benzenesulfonamide;
N-(2-benzoyl-4-chlorophenyl)-2,4,6-trimethyl-benzenesulfonamide;

N-(2-benzoyl-4-chlorophenyl)-2,4,6-tris(1-methylethyl)-benzenesulfonamide;

N-(2-benzoyl-4-chlorophenyl)-4-methoxy-benzenesulfonamide;
N-(2-benzoyl-4-chlorophenyl)-4-tricyclo[3.3.1.13,7]dec-1-yl-benzenesulfonamide;

N-[4-bromo-2-(2-fluorobenzoyl)phenyl]-3,4-dimethoxy-benzenesulfonamide;

N-[4-chloro-2-(2-chlorobenzoyl)phenyl]-4-(2-propenyloxy)benzenesulfonamide;

N-[4-chloro-2-(2-chlorobenzoyl)phenyl]-3,4-dimethoxy-benzenesulfonamide;

N-[4-chloro-2-(2-chlorobenzoyl)phenyl]-2,5-dimethoxy-benzenesulfonamide;

2-amino-N-(2-benzoyl-4-methylphenyl)-benzenesulfonamide;
N-(2-benzoyl-5-methylphenyl)-N,4-dimethyl-benzenesulfonamide;

<u>and</u>

2-amino-2'-benzoyl-4'-chloro-benzenesulfonanilide.

- 47. (Currently Amended) The modulator of claim 46, where X' and X" are each independently selected from the group consisting of hydrogen, halogen, CN, $-OR^1$, $-C(O)R^1$, $-SO_2R^1$, $-NR^1R^2$, unsubstituted or substituted C_{1-8} alkyl, unsubstituted or substituted C_{3-8} cycloalkyl, unsubstituted or substituted C_{2-8} alkenyl, unsubstituted or substituted phenyl, unsubstituted or substituted 5- or 6-membered heteroaryl, unsubstituted or substituted 5- or 6-membered heterocyclyl, with the proviso that if one of X' and X" is hydrogen than the other is not hydrogen or unsubstituted methyl.
- 48. (Currently Amended) The modulator of claim; 46, where X' and X" are each independently selected from the group consisting of hydrogen, halogen, -CN, -CF₃, -CH=CH₂, isoamyl, phenylacetylene, t-butyl, ethyl (Et), i-propyl (ⁱPr), -C(CH₃)CH₂CH₃, hydroxybutyl, -C(CH₃)₂CH₂CH₂OH, -CH₂CH₂CO₂Me, -OCF₃, -OMe, -O-ⁱPr, -C(O)Me, -SO₂Me, phenyl (Ph), -OEt, pyrazole, thiophene, aminopyridine,

oxazole, and morpholinyl, with the proviso that X' and X" cannot both be hydrogen simultaneously.

- 49. (Original) The modulator of claim 46, where Y' and Y" are each independently hydrogen or halogen, with the proviso that one or both are halogen.
- 50. (Original) The modulator of claim 46, where Y' is hydrogen and Y" is chloro or bromo.
 - 51. (Canceled).
- 52. (Currently Amended) The modulator of claim 46, where at least one of Y' or Y" is a halogen atom and is *meta* to the sulfonamide bond in formulae (!) (II) or (III).
- 53. (Currently Amended) The modulator of claim 46, where at least one of Y' or Y" is a halogen atom and is *para* to the sulfonamide bond in formula e (1) (II) or (III).
- 54. (Original) The modulator of claim 46, where Z' and Z" are each independently selected from the group consisting of hydrogen, halogen, unsubstituted or substituted C_{1-8} alkyl, unsubstituted or substituted C_{3-8} cycloalkyl, -CN, -OH, -OR⁷, -C(O)R⁷, -CO₂R⁷, -OC(O)R⁷, -CONR⁷R⁸, -NR⁷R⁸, -NR⁷CO₂R⁸, -SR⁷, -SOR⁷, -SO₂R⁷, -NR⁷SO₂R⁸, -SO₂NR⁷R⁸, unsubstituted or substituted phenyl, and unsubstituted or substituted 5- or 6-membered heteroaryl, unsubstituted or substituted 3- to 7-membered heterocycyl.
- 55. (Original) The modulator of claim 46, where Z' and Z'' are each independently hydrogen, halogen, -CN, -OR 7 , -NR 7 R 8 , -SR 7 , -SOR 7 , and -SO $_2$ R 7 , unsubstituted or substituted C_{1-6} alkoxyl, unsubstituted or substituted C_{1-6} alkyl, unsubstituted or substituted 5- or 6-membered heterocyclyl.
- 56. (Original) The modulator of claim 47, where Y' and Y" are each independently hydrogen or halogen, with the proviso that one or both are halogen.

- 57. (Original) The modulator of claim 47, where Z' and Z" are each independently selected from the group consisting of hydrogen, halogen, unsubstituted or substituted C_{1-8} alkyl, unsubstituted or substituted C_{3-8} cycloalkyl, -CN, -OH, -OR⁷, -C(O)R⁷, -CO₂R⁷, -OC(O)R⁷, -CONR⁷R⁸, -NR⁷R⁸, -NR⁷CO₂R⁸, -SR⁷, -SOR⁷, -SO₂R⁷, -NR⁷SO₂R⁸, -SO₂NR⁷R⁸, unsubstituted or substituted phenyl, and unsubstituted or substituted 5- or 6-membered heteroaryl, unsubstituted or substituted 3- to 7-membered heterocycyl.
- 58. (Original) The modulator of claim 49, where Z' and Z'' are each independently selected from the group consisting of hydrogen, halogen, unsubstituted or substituted C_{1-8} alkyl, unsubstituted or substituted C_{1-8} cycloalkyl, -CN, -OH, -OR⁷, -C(O)R⁷, -CO₂R⁷, -OC(O)R⁷, -CONR⁷R⁸, -NR⁷R⁸, -NR⁷CO₂R⁸, -SR⁷, -SOR⁷, -SO₂R⁷, -NR⁷SO₂R⁸, unsubstituted or substituted 6- to 10-membered aryl, and unsubstituted or substituted 5- or 6-membered heteroaryl, unsubstituted or substituted 3- to 7-membered heterocycyl.
- 59. (Original) The modulator of claim 56, where Z' and Z" are each independently selected from the group consisting of hydrogen, halogen, unsubstituted or substituted C_{1-8} alkyl, unsubstituted or substituted C_{3-8} cycloalkyl, -CN, -OH, -OR⁷, -C(O)R⁷, -CO₂R⁷, -OC(O)R⁷, -CONR⁷R⁸, -NR⁷R⁸, -NR⁷CO₂R⁸, -SR⁷, -SOR⁷, -SO₂R⁷, -NR⁷SO₂R⁸, -SO₂NR⁷R⁸, unsubstituted or substituted phenyl, and unsubstituted or substituted 5- or 6-membered heteroaryl, unsubstituted or substituted 3- to 7-membered heterocycyl.
- 60. (Original) A composition comprising a pharmaceutically acceptable carrier and a compound of claim 2.
 - 61-67. (Canceled)
 - 68. (New) A modulator of the formula (I) or a salt thereof:

where L is -C(O)-, -S-, -S(O)- or $-S(O)_2$ -;

X represents from 1 to 5 substituents independently selected from the group consisting of unsubstituted C_{2-8} alkyl, unsubstituted C_{3-8} cycloalkyl unsubstituted C_{2-8} alkenyl, unsubstituted 6- to 10-membered aryl, unsubstituted 5- to 10-membered heteroaryl, unsubstituted 3- to 10-membered heterocyclyl, unsubstituted 5- to 6-membered heteroaryl, unsubstituted phenyl, unsubstituted 3- to 7-membered heterocyclyl;

substituted C_{1-8} alkyl, substituted C_{3-8} cycloalkyl, substituted C_{2-8} alkenyl, substituted C_{2-8} alkynyl, substituted 6- to 10-membered aryl, substituted 5- to 10-membered heteroaryl, substituted 3- to 10-membered heterocyclyl, substituted phenyl, substituted 5- to 6-membered heteroaryl, substituted 3- to 7-membered heterocyclyl;

wherein when at least one X is substituted C_{1-8} alkyl, substituted C_{3-8} cycloalkyl, substituted C_{2-8} alkenyl, or substituted C_{2-8} alkynyl, X has from 1 to 5 substituents independently selected from the group consisting of halogen, -OH, -CN, -NO₂, =O, -OC(O)R¹, -OR¹, -C(O)R¹, -CONR¹R², -OC(O)NR¹R², -NR²C(O)R¹, -NR¹C(O)NR²R³, -CO₂R¹, -NR¹R², -NR²CO₂R¹, -SR¹, -SOR¹, -SO₂R¹, -SO₂NR¹R², -NR¹SO₂R²;

wherein when at least one X is substituted 6- to 10-membered aryl, substituted 5- to 10-membered heteroaryl, or substituted 3- to 10-membered heterocyclyl, X has from 1 to 4 substituents independently selected from the group consisting of halogen, unsubstituted or substituted C_{1-8} alkyl, -CN, $-NO_2$, -OH, $-OR^1$, =O, $-OC(O)R^1$, $-CO_2R^1$, $-C(O)R^1$, $-CONR^1R^2$, $-OC(O)NR^1R^2$, $-NR^2C(O)R^1$, $-NR^1C(O)NR^2R^3$, $-NR^1R^2$, $-NR^2CO_2R^1$, $-SR^1$, $-SO_2R^1$, $-SO_2NR^1R^2$, and $-NR^1SO_2R^2$;

wherein when at least one X is substituted phenyl, X has from 1 to 3 substituents independently selected from the group consisting of halogen, -OH, -OR¹, -C(O)R¹, -CONR¹R², -NR²C(O)R¹, -NR¹R², -SO₂R¹, and unsubstituted C_{1-8} alkyl;

wherein when at least one X is substituted 5- to 6-membered heteroaryl, X has from 1 to 3 substituents independently selected from the group consisting of halogen, $-OR^1$, $-C(O)R^1$, $-CONR^1R^2$, $-NR^2C(O)R^1$, $-NR^1R^2$, $-SO_2R^1$, and unsubstituted C_{1-8} alkyl;

wherein when at least one X is substituted 3- to 7-membered heterocyclyl, X has from 1 to 3 substituents independently selected from the group consisting of C_{1-8} alkyl, $-OR^1$, -OH, $-OC(O)R^1$, $-CO_2R^1$, $-C(O)R^1$, $-CONR^1R^2$, $-NR^1R^2$, $-SO_2R^1$, and $-NR^1SO_2R^2$;

 R^1 , R^2 and R^3 are each independently selected from the group consisting of hydrogen, unsubstituted or substituted C_{1-6} alkyl, unsubstituted or substituted C_{3-6} cycloalkyl, unsubstituted or substituted C_{2-6} alkenyl, unsubstituted or substituted C_{2-6} alkynyl, unsubstituted or substituted 6- to 10-membered aryl, unsubstituted or substituted or substituted or substituted or substituted aryl- C_{1-4} alkyl, unsubstituted or substituted aryl- C_{1-4} alkyl, and unsubstituted or substituted aryloxy- C_{1-4} alkyl; or

two of R¹, R² and R³ together with the atom(s) to which they are attached, may form an unsubstituted or substituted 5-, 6- or 7-membered ring;

Y represents from 1 to 3 substituents, each independently selected from the group consisting of halogen, -CN, -OH, -OR 4 , -C(O)R 4 , -CO $_2$ R 4 , -SR 4 , -SOR 4 , -SO $_2$ R 4 , and unsubstituted or substituted C $_{1-4}$ alkyl:

 R^4 is selected from the group consisting of hydrogen, unsubstituted or substituted C_{1-6} alkyl, unsubstituted or substituted C_{3-6} cycloalkyl, unsubstituted or substituted C_{2-6} alkenyl, and unsubstituted or substituted C_{2-6} alkynyl;

Z represents 0 to 5 substituents independently selected from the group consisting of halogen, unsubstituted or substituted C_{1-8} alkyl, unsubstituted or substituted C_{3-8} cycloalkyl, unsubstituted or substituted C_{2-8} alkenyl, unsubstituted or substituted C_{2-8} alkenyl, unsubstituted or substituted C_{1-8} alkoxy, =O, -CN, -NO₂, -OH, -OR⁷, -OC(O)R⁷, -CO₂R⁷, -C(O)R⁷, -CONR⁷R⁸, -OC(O)NR⁷R⁸, -NR⁷C(O)R⁸,

-NR⁷C(O)NR⁸R⁹, -NR⁷R⁸, -NR⁷CO₂R⁸, -SR⁷, -SO₇R⁷, -SO₂R⁷, -SO₂NR⁷R⁸, -NR⁷SO₂R⁸, unsubstituted or substituted 6- to 10-membered aryl, unsubstituted or substituted heterocyclyl; and

 R^7 , R^8 and R^9 are each independently hydrogen, unsubstituted or substituted C_{1-6} alkyl, unsubstituted or substituted C_{2-6} alkenyl, unsubstituted or substituted C_{2-6} alkenyl, unsubstituted or substituted C_{2-6} alkynyl, unsubstituted or substituted phenyl, unsubstituted or substituted heteroaryl, unsubstituted or substituted aryl- C_{1-4} alkyl, and unsubstituted or substituted aryloxy- C_{1-4} alkyl; or where any two of R^7 , R^8 and R^9 together with the atom(s) to which they are attached, may form a 5-, 6- or 7-membered ring:

wherein when Z is 1 to 5 substituents, at least one Z is substituted or unsubstituted C_{1-8} alkyl, substituted or unsubstituted C_{2-8} cycloalkyl, substituted or unsubstituted C_{2-8} alkenyl, substituted or unsubstituted C_{2-8} alkynyl, substituted or unsubstituted C_{1-8} alkoxy, unsubstituted 6- to 10-membered aryl, unsubstituted 3- to 7-membered heterocyclyl, and 3- to 7-membered heteroaryl each substituted group having from 1 to 5 substituents independently selected from the group consisting of halogen, -OH, -OR⁷, -CN, -NO₂, =O, -CN, -NO₂, -OC(O)R⁷, -CO₂R⁷, -C(O)₂R⁷, -C(O)R⁷, -CONR⁷R⁸, -OC(O)NR⁷R⁸, -NR⁷C(O)R⁸, -NR⁷C(O)NR⁸R⁹, -NR⁷R⁸, []-NR⁷CO₂R⁸, -SR⁷, -SOR⁷, -SO₂R⁷, -SO₂NR⁷R⁸, -NR⁷SO₂R⁸, unsubstituted or substituted phenyl, unsubstituted or substituted 5- or 6- membered heteroaryl, or unsubstituted or substituted or substituted heterocyclyl; and

with the proviso that the following compounds are excluded from the scope of formula (I):

N-(2-benzoylphenyl)-3,5-bis(trifluoromethyl)-benzenesulfonamide;
N-(4-amino-2-benzoylphenyl)-4-methoxy-benzenesulfonamide;
N-[4-[[(2-benzoyl-4-chlorophenyl)amino]sulfonyl]phenyl]-acetamide;
N-(2-benzoyl-4-chlorophenyl)-4-ethyl-benzenesulfonamide;
N-(2-benzoyl-4-chlorophenyl)-2,4,6-trimethyl-benzenesulfonamide;
N-(2-benzoyl-4-chlorophenyl)-2,4,6-tris(1-methylethyl)-

benzenesulfonamide;

N-(2-benzoyl-4-chlorophenyl)-4-methoxy-benzenesulfonamide;

N-(2-benzoyl-4-chlorophenyl)-4-tricyclo[3.3.1.13,7]dec-1-yl-

benzenesulfonamide;

N-[4-bromo-2-(2-fluorobenzoyl)phenyl]-3,4-dimethoxy-

benzenesulfonamide;

N-[4-chloro-2-(2-chlorobenzoyl)phenyl]-4-(2-propenyloxy)-

benzenesulfonamide;

N-[4-chloro-2-(2-chlorobenzoyl)phenyl]-3,4-dimethoxy-

benzenesulfonamide;

N-[4-chloro-2-(2-chlorobenzoyl)phenyl]-2,5-dimethoxy-

benzenesulfonamide;

2-amino-N-(2-benzoyl-4-methylphenyl)-benzenesulfonamide;

N-(2-benzoyl-5-methylphenyl)-N,4-dimethyl-benzenesulfonamide;

and

2-amino-2'-benzoyl-4'-chloro-benzenesulfonanilide.

- 69. (New) The modulator of claim 68, where at least one X is *para* to the sulfonamide bond in formula (I).
 - 70. (New) A modulator of one of the formulae (II) or (III) or a salt thereof:

where X' and X" are each independently selected from the group consisting of hydrogen, -OH, -OR 1 , -C(O)R 1 , -CO $_2$ R 1 , -O(CO)R 1 , -C(O)NR 1 R 2 , -OC(O)NR 1 R 2 , -SR 1 , -SOR 1 , -SO $_2$ R 1 , -SO $_2$ NR 1 R 2 , -NR 1 C(O)R 2 , -NR 1 C(O)R 2 , -NR 1 C(O)NR 2 R 3 , unsubstituted or substituted C $_{1-8}$ alkyl, unsubstituted or substituted C $_{2-8}$ alkenyl, unsubstituted or

substituted C_{3-8} cycloalkyl, unsubstituted or substituted 6- to 10-membered aryl, unsubstituted or substituted 5- to 10-membered heteroaryl, and unsubstituted or substituted 3- to 10-membered heterocyclyl, with the proviso that if one of X' and X" is hydrogen than the other is not hydrogen or unsubstituted methyl;

 R^1 , R_2 and R^3 are each independently selected from the group consisting of hydrogen, C_{1-6} alkyl, C_{3-6} cycloalkyl, C_{2-6} alkenyl, C_{2-6} alkynyl, 6- to 10-membered aryl, 5- to 10-membered heteroaryl, aryl- C_{1-4} alkyl, aryl- C_{1-4} alkyl, and aryloxy- C_{1-4} alkyl; or

two of R¹, R² and R³ together with the atom(s) to which they are attached, may form a 5-, 6- or 7- membered ring;

Y' is halogen;

Y" is hydrogen;

Z' and Z'' are each independently selected from the group consisting of hydrogen, halogen, unsubstituted or substituted C_{1-8} alkyl, unsubstituted or substituted C_{3-8} cycloalkyl, unsubstituted or substituted C_{2-8} alkenyl, unsubstituted or substituted C_{2-8} alkenyl, unsubstituted or substituted C_{1-8} alkoxy, =O, -CN, $-NO_2$, -OH, $-OR^7$, $-OC(O)R^7$, $-CO_2R^7$, $-C(O)R^7$, $-CONR^7R^8$, $-OC(O)NR^7R^8$, $-NR^7C(O)R^8$, $-NR^7C(O)NR^8R^9$, $-NR^7R^8$, $-NR^7CO_2R^8$, $-SR^7$, $-SOR^7$, $-SO_2R^7$, $-SO_2NR^7R^8$, $-NR^7SO_2R^8$, unsubstituted or substituted 6- to 10-membered aryl, unsubstituted or substituted 5- or 6-membered heteroaryl and unsubstituted or substituted 3- to 7-membered heterocyclyl; and

where R^7 , R^8 and R^9 are each independently hydrogen, unsubstituted or substituted C_{1-6} alkyl, unsubstituted or substituted C_{3-6} cycloalkyl, unsubstituted or substituted C_{2-6} alkenyl, unsubstituted or substituted C_{2-6} alkynyl, unsubstituted or substituted phenyl, unsubstituted or substituted heteroaryl, unsubstituted or substituted aryl- C_{1-4} alkyl, and unsubstituted or substituted aryloxy- C_{1-4} alkyl; or where any two of R^7 , R^8 and R^9 together with the atom(s) to which they are attached, may form a 5-, 6- or 7- membered ring.

71. (New) The compound of claim 70, wherein X' and X" are each independently selected from the group consisting of hydrogen, $-C(O)R^1$, $-NR^7C(O)R^8$, unsubstituted or substituted C_{1-8} alkyl, unsubstituted or substituted C_{2-8} alkenyl, unsubstituted or substituted C_{3-8} cycloalkyl,

unsubstituted or substituted 6- to 10-membered aryl, unsubstituted or substituted 5- to 10-membered heteroaryl, and unsubstituted or substituted 3- to 10-membered heterocyclyl, with the proviso that if one of X' and X" is hydrogen than the other is not hydrogen or unsubstituted methyl.

- 72. (New) The compound of claim 70, wherein Z' and Z" are each hydrogen.
- 73. (New) The modulator of claim 70, where at least one of X' or X" is situated *meta* to the sulfonamido bond.
- 74. (New) The modulator of claim 70, where at least one of X' or X" is situated *ortho* to the sulfonamido bond.